

AMENDMENTS TO THE SPECIFICATION

Please replace the following paragraph(s):

Page 5, lines 16-27:

Figures 2 through 6 illustrate various embodiments of the first invention, the power system configuration. Rather than supplying either an unregulated voltage or a battery voltage to ~~power a electronic~~ power an electronic device, the illustrated embodiments use the same regulated voltage for recharging batteries to also power the electronic device. For example, as discussed in the background, a typical power system for a notebook computer may provide 9 to 20 volts. By using a regulated voltage to both power an electronic device and recharge its batteries, embodiments of the present invention can reduce that voltage range. In the case of the example notebook computer, the voltage range may be reduced to 9 to 12.6 volts, or whatever the equivalent of the battery voltage range happens to be. Reducing the voltage range can substantially simplify and reduce the cost of many circuits and components within a typical electronic device.

Page 5, line 28 to page 6, line 6:

Figure 2 illustrates one embodiment of the novel power system configuration at a high level. An input power port 210 can be coupled to a power source 270. The power source is optional in that it may or may not be coupled to the input power port at any particular time. Power source 270 and input power port 210 are intended to represent any of a wide variety of such devices. For example, power source 270 could be an AC power outlet or an AC generator, and port 210 could be an AC/DC converter. On the other hand, power source 270 could be any of a wide variety of DC power sources, ~~such a solar panel such as a~~ solar panel, a fuel cell, or power over a local area network (LAN). In which case,

power port 210 may simply be a connector between the power source 270 and the rest of the power system.

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In any case, an unregulated voltage 250 can be supplied to a system charger voltage regulator (VR) 220. VR 220 can provide a regulated voltage 260 when the unregulated voltage 250 is available. Regulated voltage 260 can be supplied to battery unit 230. Battery unit 230 is coupled to power rail 240. Either the regulated voltage 260 or a battery voltage (not shown) from battery unit 230 can be provided on the power rail 240 as rail voltage 280. In other words, regulated voltage 260 can be used to power the power rail 240 and/or power the battery unit 230 to recharge a battery. The range of ~~regulated voltage 240~~
regulated voltage 260 can be equal to the range of the battery voltage provided by battery unit 230. For example, the bounds of the voltage range could be 9 to 12.6 volts for both the ~~regulated voltage 240~~
regulated voltage 260 and the battery voltage. Any number of circuits that can satisfy the requisite power needs can be used for system charger VR 220.

Page 7, lines 4-8:

Figure 4 illustrates another embodiment of the novel power system configuration with multiple batteries and a source selector. Many of the components can be the same as those described in Figure 2 with the exception of battery unit 430. Battery unit 430 includes a source selector 460, ~~a charging selector 430~~
a charging selector 435, and two battery pack ports 440 and 450.

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Source selector 460 can select from among the ~~regulated voltage 250~~
regulated voltage 260 and a battery voltage 490 from any one of the battery pack ports 440 and 450 to provide on ~~power rail 270~~
power rail 240. ~~Charging selector~~

430- Charging selector 435 can supply the regulated voltage 250 regulated voltage 260 to the battery pack ports 440 and 450 to recharge a discharged battery pack. Any number of approaches can be used to select none, one, or many of the battery packs for recharging. For example, as described above in Figure 1, the selection may be based on a control signal.

Page 8, lines 9-19:

Figure 6 illustrates another embodiment of the novel power system configuration using one embodiment of the novel battery pack configuration. The illustrated embodiment is similar to the one shown in Figure 5 except that battery unit 630 does not include switch 532. Instead, the battery pack port 634 in battery unit 630 includes a switching control port 638 to supply switching control signals to a battery pack 636. In other words, the switching function is performed within the battery pack 636 based on control signals from the battery pack port. The switching function may be the same as the function described above for switch 532. That is, the battery pack may connect itself to the power rail 540 to either recharge itself or power the power rail. Any number of approaches can be used to generate the control signals.

Page 9, lines 19-24:

Figure 8 illustrates one embodiment of the novel battery pack configuration 800. Many of the components can be the same as those in Figure 7 with the exception of the switch circuitry 840 and a switching control port 860 in addition to, or in place of, the communications port 760. Control signals for switch 710 can be received over port 860. Switch circuitry 840 includes switching logic 844 that can couple and decouple the battery stack using switch 710 based on the switching control signals.

Page 10, lines 19-23:

The ~~enable signal 730 enable signal 930~~ may be provided to an external system in the form of a battery status signal 970. In other embodiments, the battery status signal may be based on a combination of signals. For example, if the maximum current level and maximum temperature are also monitored as mentioned above, the status signal may be a logical AND of all three enable signals.